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## Loneliness and coping with stress in people raised as only children and people with siblings in early adulthood

### Samotność i radzenie sobie ze stresem u jedynaków i osób posiadających rodzeństwo w okresie wczesnej dorosłości

#### Abstrakt:

Celem przeprowadzonych badań było porównanie preferowanych stylów radzenia sobie ze stresem oraz doświadczania samotności w grupach osób będących jedynakami oraz osób posiadających rodzeństwo. Poszukiwano zależności między samotnością a radzeniem sobie ze stresem oraz relacyjnych determinantów stylów radzenia sobie ze stresem i samotności.

W badaniach uczestniczyło 180 osób (63.9% kobiet; 36.1% mężczyzn), pochodzących z województwa łódzkiego. Osoby te znajdowały się w okresie wczesnej dorosłości. Zastosowano następujące narzędzia badawcze: Kwestionariusz Relacji Dorosłego Rodzeństwa C. Stockera i in. (1997) w adaptacji K.Wałęckiej-Matyji (2014), Social and Emotional Loneliness Scale for Adults (SELSA-S) E. DiTommaso, Kwestionariusz Radzenia Sobie w Sytuacjach Stresowych (CISS) N.S. Endler, J.D.A. Parker w adaptacji J. Strelau i in. (2007) oraz ankietę.

Przeprowadzone analizy wskazały, że jedynacy uzyskali znacząco wyższe wyniki średnie w zakresie stylu skoncentrowanego na emocjach, stylu skoncentrowanego na unikaniu oraz w zakresie podejmowania czynności zastępczych w obliczu sytuacji stresogennej niż osoby posiadające rodzeństwo, które częściej preferowały styl zadaniowy. Otrzymane różnice w zakresie doświadczania samotności były niewielkie. Osoby posiadające rodzeństwo częściej odczuwały samotność w wymiarze romantycznym niż jedynacy, którzy częściej deklarowali samotność w wymiarze rodzinnym. Ustalono występowanie licznych, zgodnych z oczekiwaniami, choć słabych korelacji między stylami radzenia sobie ze stresem i samotnością. Wartość predykcyjną dla samotności młodych dorosłych posiadających rodzeństwo miały dwa wymiary relacji konfliktowej – Przeciwnieństwo i Dominacja. Stwierdzono, że konfliktowe relacje z dorosłym rodzeństwem pełnią rolę pośrednika zależności pomiędzy samotnością romantyczną a zaangażowaniem w czynności zastępcze.

**Słowa kluczowe:** rodzeństwo, jedynacy, style radzenia sobie ze stresem, samotność.

#### Abstract:

The aim of the conducted research was to compare the preferred styles of coping with stress and the feeling of loneliness in the groups of persons with and without siblings. We looked for correlations between loneliness and coping with stress as well as for the relational determinants of the styles of coping with stress and loneliness.

There were 180 participants (63.9% of women; 36.1% of men), coming from the district of Łódź, Poland. These persons were in the period of early adulthood. The following methods were used in the study: Adult Siblings Relationships Questionnaire C. Stockera i in. (1997) in Polish adaptation by K.Wałęckiej-Matyji (2014), Social and Emotional Loneliness Scale for Adults (SELSA-S) E. DiTommaso, Coping Inventory for Stressful Situations (CISS) by N.S. Endler and J.D.A. Parker in Polish adaptation by J. Strelau i in. (2007) and the author's own questionnaire.

The conducted analyses show that there are significant differences in styles and ways of coping with stress between persons with and without siblings. Persons with siblings take action to combat stress, whereas those without cease their activities in stressful situations. The same results were obtained by comparing separately a group of women and men.

Persons with siblings more often experienced loneliness in the romantic dimension than only children, who, on the other hand, more frequently declared experiencing loneliness in the family dimension. In the group of sibling dyads, gender was a factor that differentiated the dimensions in which the young adults experienced loneliness. We noted the occurrence of numerous correlations between the styles of coping with stress and loneliness in the compared groups of only children and persons with siblings. The variables of Opposition and Domination had predictive value for the loneliness. It was found out that conflictual relationships with adult siblings are a mediator of the correlation between romantic loneliness and engaging in surrogate activities.

**Key words:** siblings, only children, styles of coping with stress, loneliness.

## 1. Introduction

The course of psychosocial development of a human being is determined by numerous factors of a constitutional and environmental nature, which, while interacting, set the functioning pattern of an individual. Considering the environmental determinants, the researchers assign the leading role in development to the family of origin, especially its structure (Adler, 1986; Tyszkowa, 1984; Rostowska, 2008; Wałęcka-Matyja, 2009). Therefore, it is considered important if a person has been raised together with siblings or as an only child. Although research in this area shows a more and more versatile approach to the psychological aspects of only children's functioning, which substantially differs from the stereotypical image (Całczyńska, 2017; Litwińska, 2010; Połomski, Peplińska, 2010; Wang, Kato et al., 2000), they are still viewed as having some specific personal traits formed as a result of growing up without siblings. However, it is emphasized that the sources of some traits assigned to only children are being searched for not in the very fact of a lack of contact with siblings but in family circumstances which often accompany the fact of being an only child (Lewandowska-Walter, Połomski, Peplińska, 2014; Rembowski, 1975). The factors which are especially considered here are specific parental attitudes. On the one hand, they are very protective and controlling, on the other hand – full of demands. That constitutes an exceptionally difficult psychological situation for an only child in the family whereas children having siblings are raised in completely different family conditions. According to the researchers, a higher number of children in the family modifies the parenting styles, distributing the attention and demands of the guardians among the whole offspring group (Richardson, Richardson, 1999). The quality of the socialization process of only children in the family is also determined by other social experiences and a limited access to a peer mirror in early ontogenesis. It is stressed that the fact of having siblings enables a person to gain knowledge about social relationships and improves the interpersonal communication process (Poraj, 1988; Tyszkowa, 1984). Family specialists assume that persons raised as only children will probably have fewer opportunities to develop so comprehensively in the social aspect in early ontogenesis since they mostly had contact only with their parents. This can

make them demonstrate behaviours that are not quite adequate for their age, that may be too mature (Roberts, Blanton, 2001). Thus, it is likely that only children will more often demonstrate difficulties with establishing contacts with other people and adaptation to new situations (Tyszkowa, 1984). They will also more often experience loneliness, having at the same time a deep need for emotional contacts with other people (Richardson, Richardson, 1999). This feeling of loneliness accompanying only children, seen in their tendency to act on their own and protect their privacy, was also noticed by J. Pitkeathley and D. Emerson (2012). However, it is indicated that other studies did not confirm the previous findings and the results obtained for only children in most psychosocial aspects were comparable with the results of the other groups of surveyed children (Falbo, Polit, 1987; Połomski, 2002; Poraj, 1988; Tyszkowa, 1984). Referring to the necessity of coping with stress in a difficult situation, only children's position is different from the one of children with siblings. They do not have an elder sister or an elder brother to be a role model for them to learn how to cope with stress. What is more, as only children in the family, they do not have such close people from their family subsystem who, being in similar age, perceiving a difficult situation in a similar way, sharing family experiences with them and often inspiring more trust in them than adults, would be able to provide them with help. Therefore, it could be especially hard for people raised as only children to cope with such circumstances as leaving family home or coping in situations when their parents are growing older or die since they may not be able to get any support from close people in such difficult moments. In situations of this kind, the fact of being an only child can make such experiences even more difficult to cope with. In the light of theoretical considerations, persons with siblings and without siblings have different potentials of skills and resources which they may use in the face of stress evoking situations. Researchers draw our attention to an exceptionally significant role siblings play for each other in the face of difficult circumstances. This close relationship is a buffer which facilitates coping in tough life moments (Cicirelli, 1995; Merz, De Jong Gierveld, 2016; Mikkelsen et al., 2011; Wałęcka-Matyja, 2015). Furthermore, siblings are an invaluable source of social support (Tucker et al., 2003), which is regarded as one of the most significant resources in the process of coping with stress (Hobfoll, 2006).

Summing up, the research results showing differentiation in the functioning of people from small or big families are still considered to be inconsistent (Grzankowska, Basińska, 2014; Połomski, Peplińska, 2010; Poraj, 1988; Richardson, Richardson, 1999; Tyszkowa, 1984; Wang, Kato et al., 2000). That gave us inspiration to take up research whose results are presented in this study.

## **2. Research aim and research questions**

The aim of the conducted research was to determine if in the groups of people raised as only children and those having siblings, there was differentiation in styles of coping with stress and experiencing loneliness. Moreover, an attempt was made to determine whether

there were correlations between loneliness and coping with stress and to find the relational indicators of loneliness. While conducting analyses only in the group of people with siblings, we examined if the quality of an adult sibling relationship would be a mediator in the assumed correlation between experiencing loneliness and stress coping styles. The following research questions were asked in the study:

- 1) Do persons with siblings differ from those raised as only children in respect of styles of coping with stress and experiencing loneliness and how?
- 2) What styles of coping with stress and types of loneliness prevail among women and men from the compared groups?
- 3) Are there any correlations between styles of coping with stress and loneliness?
- 4) Do the dimensions of a sibling relationship determine experiencing loneliness among young adults?
- 5) Is the quality of a sibling relationship a mediator in the correlation between loneliness and stress coping styles in the group of sibling dyads?

Due to the exploratory nature of the study, no specific research hypotheses were formulated. However, it was expected that the persons with siblings would differ from those raised as only children as regards the styles they employed to cope with stress and in the aspect of experiencing loneliness. Persons with siblings would more often use a task-oriented style than people raised as only children. Moreover, numerous and differentiated correlations were expected to occur between stress coping styles and loneliness. It was assumed that the dimensions of a sibling relationship (i.e. Conflict and Rivalry) would have predictive value for experiencing loneliness. Furthermore, it was expected that the quality of a sibling relationship in early adulthood would be a mediator in the correlation between loneliness and stress coping styles.

## 2.1. Method

### Participants

The carried-out studies covered 180 persons in total (63.0% of women (n=115); 36.1% of men (n=65), coming from the district of Łódź. These people were in early adulthood, ranging from 18 to 35 years of age (M=26,2; SD=3,89) (Gurba, 2006). The selection of people to the study was purposeful – based on the criterion of having siblings or lack of them. Due to the mentioned criterion, two comparative groups were created. The first one consisted of people with siblings (n=90) whereas the other comparative group was made up with people raised as only children (n=90). In the group of people with siblings, there were 50% of women and 50% of men. On the other hand, in the group of people raised as only children, women accounted for 77.8% of the group (n=70), and men for 22.2% (n=20). The majority of the respondents were residents of urban areas (81.7%; n=147), single (66.6%; n=120) and originated from full families (100%). They were characterized by a different level of education. Most of them had higher and incomplete higher education (respectively 33.9%;

n=61 and 33.3%; n=60) and some of them had secondary education (28.3%). The least numerous group of respondents had vocational education (4.4%; n=8).

## 2.2. Course of research

The research was carried out in Poland in the district of Łódź in 2016<sup>1</sup>. The purposeful selection was applied based on the following criteria: young people in the age of 18 to 35 years, having adult, biological siblings and raised as only children, full family of origin. The respondents were informed about the aim of the study, anonymity, using the results exclusively for scientific purposes as well as the fact that they are able to refuse to participate in the study at any stage. Empirical material was collected directly from the participants of the project, who were given the set of psychological tests only after expressing their clear consent to that and then they were asked to answer the items included in these questionnaires.

## 2.3. Research tools

Three research tools were applied: Adult Siblings Relationship Questionnaire by C. Stocker et al. (1997) in the adaptation of K. Wałęcka-Matyja (2014), Social and Emotional Loneliness Scale for Adults (SELSA-S) by E. DiTommaso in the adaptation of K. Adamczyk and E. DiTommaso (2014), Coping in Stressful Situations Questionnaire (CISS) by N.S. Endler, D.A. Parker in the Polish adaptation of J. Strelau et al. (2007) and the survey.

Adult Siblings Relationship Questionnaire (ASRQ) by C. Stocker et al. (1997) in the adaptation of K. Wałęcka-Matyja (2014) was used to measure the psychological aspects of interpersonal sibling relationships in adulthood. It evaluated how the respondents perceived their behaviours and feelings towards their siblings and how they perceived their siblings' behaviours and feelings towards them.

The Adult Sibling Relationship Questionnaire contains 81 items, which make up 14 scales: Affection, Knowledge, Intimacy, Emotional Support, Admiration, Similarity, Instrumental Support, Acceptance, Opposition, Domination, Quarrel, Competition, Maternal Rivalry and Paternal Rivalry. They are included in three factors: Warmth, Conflict and Rivalry. All the ASRQ items are rated on a Likert's scale from "hardly anything" (1 point) up to "extremely much" (5 points). Statistical analysis has shown that the ASRQ factors, i.e. Warmth, Conflict and Rivalry, are characterized by high internal consistency (range of reliability between 0.87 - 0.97) (Wałęcka-Matyja, 2014).

Emotional Loneliness Scale for Adults (SELSA-S) by E. DiTommaso, C. Brannen, L. A. Best (2004) was adapted to Polish conditions by K. Adamczyk and E. DiTommaso (2014). The tool takes into account the fact that there are two kinds of loneliness, the social and the

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<sup>1</sup> Research was conducted by Ewa Rutkowska within master's thesis seminar.



emotional ones. It has been assumed that the emotional loneliness dimension consists of two domains, i.e. the family loneliness and the romantic one (DiTommaso i in. 2004; Weiss, 1973).

SELSA-S contains 15 statements. An examined person assesses to what extent they agree or disagree with each of them. The answer should be marked on a seven-grade scale. The Cronbach's  $\alpha$  reliability coefficient for the three SELSA-S subscales ranges from 0.83 to 0.87 (Adamczyk, DiTommaso, 2014).

The Coping Inventory for Stressful Situations (CISS) by N. S. Endler and D. A. Parker in the Polish adaptation (Strelau et al., 2007) consists of 48 simple affirmative sentences. They are related to different behaviours that people demonstrate in difficult situations.

A respondent is expected to mark their answer on a 5-grade Likert's scale by saying how often they do a given action in a stressful situation. CISS measures three styles of coping with stress: a task-oriented coping style, an emotion-oriented coping style and an avoidance-oriented coping style, where two forms of coping have been distinguished: engagement in surrogate activities, e.g. overeating or sleeping and seeking social contacts. The Cronbach's  $\alpha$  values for the individual subscales fall in the range from 0,71 to 0,89 and are satisfactory (Strelau et al., 2007).

#### **2.4. Statistical procedures**

Due to statistically significant deviations of the distribution shape of the examined variables from normal distribution, the conducted analyses were based on the bootstrapping method. In the first stage, in order to compare the groups of persons raised as only children and persons with siblings in respect of loneliness and stress coping styles, a statistical analysis was carried out using the Student's t test based on the bootstrapping method. The obtained mean and standard deviation values provided the ground for determining the Cohen's d effect size. The strength of the linear association between variables was estimated by means of the Pearson's r correlation coefficient. The related literature provides evidence indicating that deviations from normal distribution do not have a greater impact on estimating the Pearson's r correlation coefficients (Havlicek, Peterson, 1976).

A stepwise linear regression analysis was applied to determine a predictive value of sibling relationship dimensions. And Hayes' PROCESS Macro was used to evaluate the mediating role of adult sibling relationships. It is considered to be more useful than the commonly applied Sobel's test. Its advantage is the fact that it enables testing a few parallel mediators in one model (Hayes, 2013). In case of all the applied tests, the assumed level of significance is  $\alpha = 0.05$ . The software used for processing data is IBM SPSS AMOS 25.

### 3. Results

#### 3.1. Differentiation in respect of stress coping styles

In order to answer the question if there is differentiation in respect of stress coping styles preferred by people raised as only children and persons with siblings, a statistical analysis was carried out using the Student's t test based on the bootstrapping method (tab.1).

Table. 1a. Differentiation in respect of stress coping styles in groups of people raised as only children and persons with siblings

	Compared groups			
	Only children n=90		Persons with siblings n=90	
	M	SD	M	SD
Style - task	57,63 (55,91 ÷ 59,09)	7,50	59,67 (58,70 ÷ 60,71)	4,77
Style - emotion	47,93 (45,41 ÷ 50,35)	11,20	37,67 (36,03 ÷ 39,56)	7,85
Style - avoidance	48,60 (46,56 ÷ 50,27)	8,32	42,45 (40,93 ÷ 43,91)	7,18

Table. 1b. Differentiation in respect of stress coping styles in groups of people raised as only children and persons with siblings

Surrogate activities	22,17 (20,82 ÷ 23,32)	5,64	17,96 (17,08 ÷ 18,81)	4,29
Seeking social contacts	17,82 (17,11 ÷ 18,47)	3,33	17,70 (17,10 ÷ 18,33)	2,95

The results of the conducted research (tab.1) revealed that the persons raised as only children obtained significantly higher scores in respect of the emotion-oriented style ( $t(159.44) = 6.624; p < 0.002; d = 1.06$ ), the avoidance-oriented style ( $t(178) = 5.339; p < 0.002; p < 0.002; d = 0.79$ ) and surrogate activities in the face of stressful situations ( $t(166.17) = 5.583; p < 0.002; d = 0.84$ ). In all the mentioned cases, Cohen's *d* values proved a strong correlation between the variables. The persons having siblings obtained higher mean scores than the ones raised as only children in respect of the task-oriented style, though it is stressed that the strength of the correlation between the variables was small ( $t(150.85) = -2.114; p < 0.032; d = -0.33$ ). No statistically significant difference was observed between the compared groups of young adults in respect of coping with stress through seeking social contacts ( $t(178) = 0,264; p < 0,814$ ).

In the next stage, an attempt was made to determine if there is differentiation in respect of loneliness dimensions between the examined groups of people raised as only children and those with siblings. The obtained results are presented in table 2.

The obtained research results (tab. 2) indicate that the persons having siblings obtained higher mean scores in respect of experiencing romantic loneliness ( $t(150.85) = -2.552; p < 0.012$ ) than the ones raised as only children, although the strength of correlation between the variables is small ( $d = 0,39$ ). In respect of family loneliness, the persons raised as only children obtained higher mean scores than the persons with siblings ( $t(159.44) = 2.584; p < 0.012$ ). The Cohen's *d* coefficient value indicates a small strength of correlation between the variables ( $d = -0,39$ ). In respect of social loneliness, no statistically significant differences were noted between the compared groups of young adults ( $t(178) = 1.158; p < 0.247$ ).



Table 2. Differentiation in respect of loneliness dimensions in groups of people raised as only children and persons with siblings

Loneliness	Compared groups			
	Only children n=90		Persons with siblings n=90	
	M	SD	M	SD
Romantic	2,83 (2,53 ÷3,17)	1,61	3,50 (3,12 ÷3,88)	1,85
Family	2,71 (2,49 ÷2,95)	1,18	2,31 (2,13 ÷2,51)	0,86
Social	2,72 (2,52 ÷2,95)	1,07	2,54 (2,34 ÷2,76)	0,98

Table 3 presents the mean values of the intensity of the employed coping styles depending on gender of the examined persons and the fact whether they have siblings or not.

Table 3. Mean values of coping styles' intensity according to gender and the fact of having siblings

Stress coping styles	Examined groups							
	Women- only children		Men- only children		Women with siblings		Men with siblings	
	M	SD	M	SD	M	SD	M	SD
Style - task	57,24	7,63	59,00	7,06	60,18	4,05	59,18	5,40
Style-emotions	48,77	10,23	45,00	14,04	41,47	7,60	33,89	6,14
Style-avoidance	49,17	7,55	46,60	10,61	45,16	6,39	39,76	6,99

Based on the results of an analysis of variance on repeated measures, it was found out that there were statistically significant differences between the intensity of individual stress coping styles. That concerned the group of women raised as only children,  $F(1,66;114,80)=22,24$ ,  $p<0,001$ ,  $\eta^2=0,24$ , the group of men raised as only children,

$F(2,38)=9,41$ ,  $p<0,001$ ,  $\eta^2=0,33$ , the group of women having siblings,  $F(2,88)=100,65$ ,  $p<0,001$ ,  $\eta^2=0,70$ , and the group of men having siblings,  $F(2,88)=168,07$ ,  $p<0,001$ ,  $\eta^2=0,79$ . Based on a pairwise comparison test with Bonferroni correction, it was found out that in the group of people raised without siblings, the intensity of the task-oriented style was higher than the intensity of the emotion-oriented style and the avoidance-oriented one. The intensities of the emotion-oriented style and the avoidance-oriented one were similar to each other. That was true for both women and men. The values of the pairwise comparison test in the group of women were following:  $t=4,91$ ,  $p<0,001$ ,  $d=0,59$ , for comparing the intensities of the task-oriented style and the emotion-oriented one,  $t=6,58$ ,  $p<0,001$ ,  $d=0,79$ , for comparing the intensities of the task-oriented style and the avoidance-oriented one and  $t=-0,31$ ,  $p>0,05$ ,  $d=-0,04$ , for comparing the intensities of the emotion-oriented style and the avoidance-oriented one. The values of the pairwise comparison test in the group of men were following:  $t=3,27$ ,  $p<0,05$ ,  $d=0,73$ , for comparing the intensities of the task-oriented style and the emotion-oriented one,  $t=3,58$ ,  $p<0,01$ ,  $d=0,80$  for comparing the intensities of the task-oriented style and the avoidance-oriented one and  $t=-0,60$ ,  $p>0,05$ ,  $d=-0,13$ , for comparing the intensities of the emotion-oriented style and the avoidance-oriented one. On the other hand, in the group of people raised with siblings, the intensity of the task-oriented style was the highest, the intensity of the avoidance-oriented style - lower and the intensity of the emotion-oriented style - the lowest. In the group of people with siblings, apart from the difference between the intensity of the task-oriented style and the intensity of the other styles, some statistically significant differences were obtained between the intensity of the emotion-oriented style and the intensity of the avoidance-oriented one. Such differences were found both in the group of women and men. The values of the pairwise comparison test in the group of women were following:  $t=12,88$ ,  $p<0,001$ ,  $d=1,92$ , for comparing the intensities of the task-oriented style and the emotion-oriented one,  $t=11,83$ ,  $p<0,001$ ,  $d=1,76$ , for comparing the intensities of the task-oriented style and the avoidance-oriented one and  $t=-2,53$ ,  $p<0,05$ ,  $d=-0,38$ , for comparing the intensities of the emotion-oriented style and the avoidance-oriented one. The values of the pairwise comparison test in the group of men were following:  $t=17,54$ ,  $p<0,001$ ,  $d=2,61$ , for comparing the intensities of the task-oriented style and the emotion-oriented one,  $t=11,75$ ,  $p<0,001$ ,  $d=1,75$ , for comparing the intensities of the task-oriented style and the avoidance-oriented one and  $t=-4,88$ ,  $p<0,001$ ,  $d=-0,73$  for comparing the intensities of the emotion-oriented style and the avoidance-oriented one.

Table 4 presents the mean values of the intensity of loneliness dimensions depending on gender of the examined persons and the fact whether they have siblings or not.

Table 4. Mean values of loneliness dimensions' intensity according to gender and the fact of having siblings

Loneliness	Examined groups							
	Women-only children		Men-only children		Women with siblings		Men with siblings	
	M	SD	M	SD	M	SD	M	SD
Romantic	2,82	1,58	2,91	1,75	3,54	1,81	3,46	1,91
Family	2,59	1,06	3,16	1,49	2,29	0,87	2,34	0,88
Social	2,69	1,08	2,82	1,05	2,29	0,76	2,79	1,13

Based on the results of an analysis of variance on repeated measures, no statistically significant differences were detected between the analysed kinds of loneliness in the group of people raised without siblings. That referred to both women,  $F(1,46;100,49) = 0,81, p > 0,05$ , and men,  $F(2,38) = 0,42, p > 0,05$ . However, some statistically significant differences were found between the intensities of individual loneliness kinds in the group of people with siblings, both women,  $F(1,31;57,78) = 16,84, p < 0,001, \eta^2 = 0,28$ , and men,  $F(1,31;57,74) = 9,30, p < 0,01, \eta^2 = 0,17$ .

The results of the analysis of variance on repeated measures were complemented with a multiple comparisons test with Bonferroni correction. In the group of women with siblings, the level of romantic loneliness was found to be higher than the level of family loneliness,  $t = 4,26, p < 0,001, d = 0,63$ , and social one,  $t = 4,35, p < 0,001, d = 0,65$ , whereas no statistically significant differences were detected between family loneliness and social one,  $t = 0,03, p > 0,05, d = 0,01$ . In the group of men, it was found out that the intensity of romantic loneliness,  $t = -4,20, p < 0,001, d = -0,62$ , and social one,  $t = -2,87, p < 0,05, d = -0,43$ , was higher than the intensity of family loneliness whereas between the level of romantic loneliness and social one, no statistically significant differences were detected,  $t = 2,03, p > 0,05, d = 0,30$ .

In further stages, it was analysed if there were correlations between stress coping styles and multidimensional loneliness and of what kind. To carry out this task, the Pearson's  $r$  correlation coefficients were used together with confidence intervals determined on the basis of bootstrapping. The obtained results are presented in tables 5 and 6, which, for clarity purposes, contain only statistically significant results.

Table 5. Correlations between stress coping styles and experiencing loneliness in the group of people raised as only children

Stress coping style	Romantic Loneliness	Family Loneliness	Social Loneliness
Style- task	-0,386** (-0,566÷-0,191)	-0,414** (-0,568÷-0,215)	-0,183* (-0,394÷-0,005)
Style- emotion	0,296** (0,115÷0,467)	0,447** (0,270÷0,598)	-
Style- avoidance	-	-	-
Surrogate activity	0,259* (0,073÷0,431)	0,284** (0,025÷0,493)	-
Seeking social contacts	-	-0,422** (-0,582÷-0,232)	-0,492** (-0,632÷-0,348)

\*p = 0,05; \*\*p = 0,01

Table 6. Correlations between stress coping styles and experiencing loneliness in the group of people with siblings

Stress coping style	Romantic Loneliness	Family Loneliness	Social Loneliness
Style- task	-0,372** (-0,567÷-0,206)	-0,203* (-0,407÷-0,001)	-
Style- emotion	-	-	-
Style- avoidance	-	-	-0,393** (-0,532÷-0,232)
Surrogate activities	0,250* (0,056÷0,442)	-	-
Seeking social contacts	-	-0,510** (-0,696÷-0,267)	-0,634** (-0,725÷-0,526)

\*p = 0,05; \*\*p = 0,01

The obtained results (tab. 5, 6) indicate that there are numerous, though weak, correlations between stress coping styles and multidimensionally described loneliness in both compared groups of young adults.

In the groups of people raised as only children and persons with siblings, the strongest negative correlations were revealed between one of the types of the avoidance-oriented style, i.e. seeking social contacts, and social and family loneliness. In both the groups of the examined persons we observed the occurrence of moderate correlations between the task-oriented style and romantic loneliness. Also, in both the groups, the task-oriented style was correlated with family loneliness. In the group of people raised as only

children, the emotion-oriented style was positively, though weakly, correlated with romantic loneliness whereas its correlation with family loneliness was moderate and positive. Moreover, in the group of people raised as only children, there were weak, positive correlations between a variant of the avoidance-oriented style, i.e. engaging in surrogate activities, and romantic and family loneliness. A positive, weak correlation between engaging in surrogate activities and romantic loneliness occurred also in the group of persons with siblings. The avoidance-oriented style was weakly and negatively correlated with social loneliness.

In order to evaluate the impact of the individual dimensions of a sibling relationship on experiencing loneliness, a stepwise regression analysis was conducted. The results of the series of stepwise analyses were presented in table 7. As independent variables, we entered individual dimensions of an adult sibling relationship, as dependent ones – dimensions of loneliness. The regression analyses were also based on bootstrapping, which helped to determine confidence intervals for the regression coefficients and to correct the statistical significance test values of the predictors.

Table 7. Stepwise analyses series results

Independent variables	Dependent variables	$\beta$	t	p
Opposition	Romantic loneliness	0,221 (0,014÷0,402)	2,210	0,025
Domination	Social loneliness	0,381 (0,068÷0,645)	2,646	0,012

As a result of the conducted regression analysis, a predictive value of the dimensions of a sibling relationship for multidimensionally described loneliness was estimated. It appeared that the dimension of Opposition<sup>2</sup> determined experiencing romantic loneliness in young adults. The tested model was well-fitted to the data ( $F=4,517$ ;  $p<0,036$ ), and the independent value explained 4,9% of variance in results of the dependent variable ( $R^2=0,049$ ). The dimension of Domination<sup>3</sup> was an indicator of experiencing family loneliness in young adults. The regression model was characterized by a good adjustment to the data ( $F=14,988$ ;  $p<0,000$ ). The dimension of Domination explained 14,6% of variance in results for loneliness experienced in the family aspect ( $R^2=0,146$ ). The quality of an adult sibling relationship was not an indicator for social loneliness.

Sibling relationships were also analysed in the role of a mediator of correlations

<sup>2</sup> Subscale *Opposition* determines a degree in which siblings are perceived as annoying, acting out of spite and ridiculing the other sibling (Wałęcka-Matyja, 2016).

<sup>3</sup> Subscale *Domination* indicates the leading role played by one person of a sibling dyad, who treats the other sibling with superiority and imposes their will on them (Wałęcka-Matyja, 2016).

between loneliness and stress coping styles in the group of people having siblings. The analysis was conducted on the basis of Hayes macro Process<sup>4</sup> in model no. 4. Due to statistically significant deviations from normal distribution, the estimators were calculated based on bootstrapping. We analysed the following elements as predictors: romantic, family and social loneliness. The elements such as Warmth, Conflict and Rivalry being sibling relationship dimensions were regarded as parallel intervening variables (mediators). The analysed dependent variables were the intensity of the task-oriented style, the emotion-oriented style, the avoidance-oriented style, engaging in surrogate activities and seeking social contacts. In total, the analysis covered 3 predictors x 5 dependent variables, which resulted in 15 mediation models. In each of the models, we analysed the statistical significance of path a (between a predictor and mediators), path b (between mediators and a dependent variable), path c (general correlation between a predictor and a dependent variable, i.e. without considering the impact of a mediator) and path c' (direct correlation between a predictor and a dependent variable, i.e. after excluding the impact of a mediator).

In the next stage of the analysis an expected mediation effect was evidenced. It was only obtained in one of the 15 analysed models. Figure 1 shows the model with the regression coefficient values.

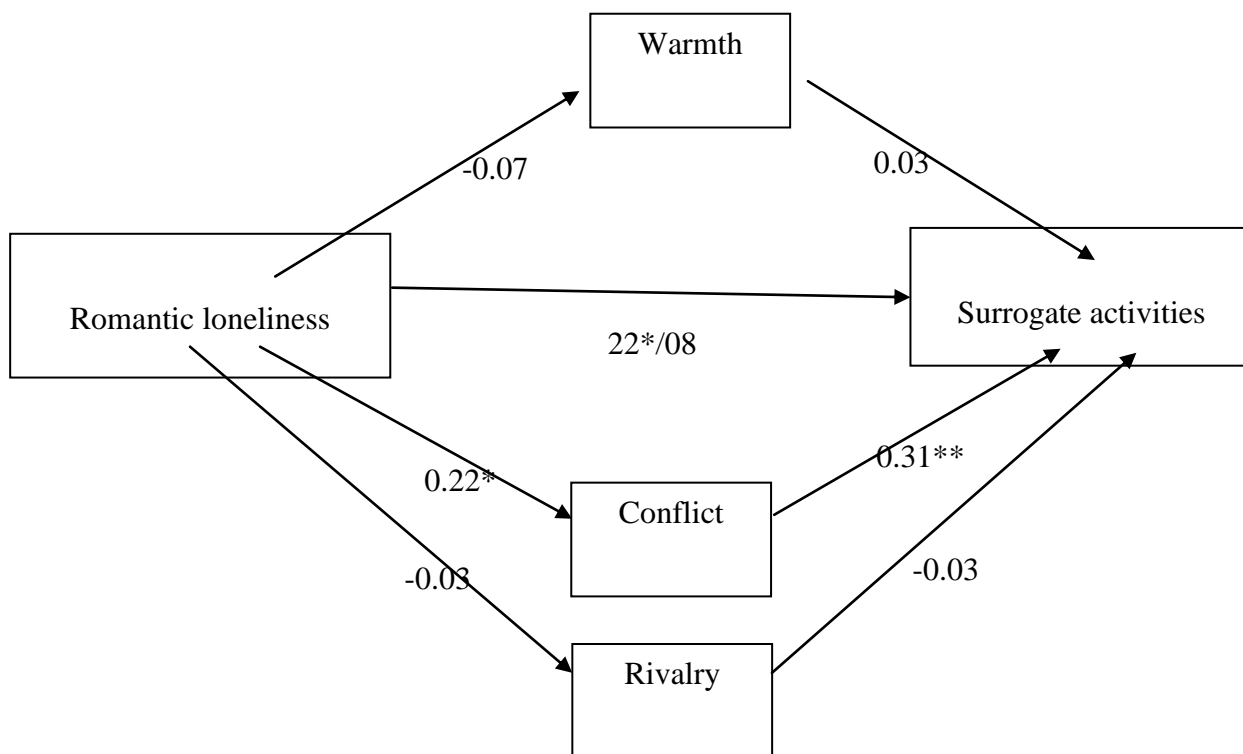


Fig. 1. Picture of correlations analysed in mediation analysis

<sup>4</sup> It is regarded as more useful as the commonly used Sobel's test. Its advantage is the fact that it enables testing a few parallel mediators in one model (Hayes, 2013).



Analysing the obtained results (fig.1), it can be seen that the dimension of conflict of an adult sibling relationship acts as a mediator in the correlation between romantic loneliness and engagement in surrogate activities in a stressful situation. The fact of experiencing loneliness in the romantic aspect was a statistically significant, positive indicator of a conflictual relationship with adult siblings. On the other hand, Conflict in a sibling relationship translated to a higher level of engagement in surrogate activities in a situation of experiencing psychological stress. The correlation between romantic loneliness and engagement in surrogate activities in the group of people having siblings was statistically significant and positive, yet, in case of controlling the mediator values, the strength of this correlation tended to fall below the statistical significance threshold value.

#### 4. Discussion

Despite a lack of childhood experiences of growing up with siblings, persons raised as only children are usually well prepared to adult life as far as the social and cognitive aspects are concerned. However, researchers point to some traits developed in them as a result of family circumstances that accompany growing up as only children (Tyszkowa, 1984; Pitkeathley, Emerson 2012; Richardson, Richardson, 1999; Rostowska, 2008).

The presented research results reveal the occurrence of statistically significant differentiation in respect of the majority of stress coping styles employed by people raised as only children and persons with siblings. It was noticed that in the face of a difficult situation, persons raised as only children tended to use the emotion-oriented style and the one based on avoiding confrontation with the problem through engaging in surrogate activities. On the other hand, people with siblings made an effort to solve the problem through cognitive transformation or attempts to change the situation. The obtained results confirm the findings of other authors indicating that a great number of people raised as only children cannot cope well with conflicts and have difficulties with solving them. That is often demonstrated by a tendency to avoid conflictual situations, prevent arguments or withdraw from them (comp. Majewska, 2015; Pitkeathley, Emerson, 2012). What is interesting, having analysed the compared groups in terms of gender, it was found out that the task-oriented style prevailed over the other two styles, i.e. the ones based on emotion and avoidance, both in the group of people raised as only children and the one consisting of people with siblings. While interpreting the obtained research results, we point to different potentials of skills and resources used in stressful situations by persons with and without siblings (Cicirelli, 1995; Hobfoll, 2006). The results of the analyses carried out by Polit and Fablo (1987) show that, unlike sibling dyads, only children hardly ever experience conflictual or competitive situations in which other children are occasionally involved. Therefore, they are not subject to such intensive social training in coping with conflict as persons with siblings. Thus, the process of acquiring the abilities to face conflictual situations in early ontogenesis might be somewhat limited. Another explanation of the obtained results may be related to the kind of

parenting attitudes demonstrated by parents of only children. Rembowski (1975) discovered that mothers of only children to a greater extent demonstrated overprotective attitudes than mothers of more children than one. Thus, it might be them who do not allow their children to confront a problem or even deal with difficult situations for them. As a result, an only child has little opportunity to demonstrate their ability to solve problems, they rather learn how to avoid them. Researchers indicate that experiences from childhood are in a way continued in adult life (Pitkeathley, Emerson, 2012). It is probable, that while demonstrating a preference for particular stress coping styles, only children tend to mainly employ the matrix of stress coping styles used in earlier periods of life. It is worth emphasizing that, although the employed stress coping styles also depend on many other factors, such as the importance of a given situation for a person, the perceived support level, subjective properties, especially in case of people raised as only children, we can speak about greater importance of the family environment in comparison to people with siblings. First of all, we can observe a bigger influence of the parents on such a child, which results from a significantly smaller number of possible interactions in families with one child than in families with more children. That definitely strengthens emotional relationships between the members of one-child families (Lewandowska-Walter, Połomski, Peplińska, 2014).

Considering the research results referring to the experience of loneliness in the groups of people raised as only children and persons with siblings, it was noticed that there were some differences in this respect, and though they are small, it is worth reflecting on their reasons. A general observation concerns the fact that both people raised as only children and people with siblings experienced loneliness to a small extent and did not differ in the dimension of social loneliness (comp. Adamczyk, DiTommaso, 2014). The obtained result can be explained by the age of the examined people, who were in early adulthood (18 to 35 years). This period is characterized by activity in numerous social areas, such as the family, peer, professional ones (Gurba, 2006), which generally prevents the feeling of loneliness. Persons having a brother or a sister significantly more often experienced a lack of a satisfying, intimate, romantic relationship than people raised as only children. Looking for explanation for the obtained research results, the findings of Peplińska and Połomski (2007) were quoted, which indicated that people raised as only children demonstrated a greater degree of domination, sociability and attractiveness through conformism than people with siblings. That can provide an answer to the fact that they showed more initiative in establishing interpersonal contacts, engaging in social contacts as well as a willingness to have a big group of acquaintances and a need to be popular and liked by others. These features of social functioning of the people raised as only children may have translated into a success in building relationships of a romantic nature. However, it is stressed that this is not the only explanation for the obtained research results (comp. Janicka, 2017). On the other hand, it was the people raised as only children who more often declared a sense of loneliness in the family aspect than persons having siblings. Interpreting the research results, we can refer to the role that is mainly played by siblings – it is the role of a companion (Walecka-

Matyja, 2018). Moreover, the period of early adulthood of a person is the stage when their family of origin experiences abandonment by adult children. In properly functioning families, the parents are able to leave the roles played at the previous stages, i.e. of a responsible or a sacrificing parent, and focus in a greater degree on a renewal of the relationship with their partner or a development of their interests. This kind of a psychological situation in the family of origin can make an only child experience loneliness in the family aspect. In the light of the theory of psychosocial development by E. Erikson, family loneliness can also be related to an unresolved crisis referred to as *the need of intimacy vs. isolation*. A failure to establish, at this stage of life, satisfying, intimate interpersonal relationships may result in a feeling of loneliness (Erikson, 2011).

Analysing the correlations between stress coping styles and loneliness in the groups of persons raised as only children and people with siblings, a great number of positive, though weak, correlations were noticed. In both the groups, a higher level of experiencing loneliness in the social and family aspects was associated with a smaller tendency to cope with stress through seeking social contacts. The examined persons might not have had warm, supporting relationships with other people, which was the reason why they experienced loneliness and failed to take advantage of social support networks. Moreover, it was observed that in both the groups of the examined young adults, a higher intensity of romantic loneliness was associated with a smaller tendency of the respondents to employ the task-oriented style. In both the groups, a higher intensity of family loneliness was associated with a smaller willingness to confront with a difficult problem. In the group of people raised as only children, a higher intensity of romantic and family loneliness was associated with a bigger willingness of the respondents to engage in activities which were not aimed at solving a difficult situation. A positive, weak correlation between engaging in surrogate activities and romantic loneliness was also revealed in the group of people having siblings. The avoidance-oriented style was negatively and weakly correlated with the sense of social loneliness. The obtained results indicating a limiting role of the multi-faceted loneliness in coping with stress find confirmation in the findings of other researchers (comp. Heszen-Niejodek, 2005; Hobfoll, 2006).

Looking for relational variables with predictive value for the styles of coping with stress in the group of people with siblings, it was found out that this property was present in two dimensions of a relationship based on conflict, i.e. Opposition, which determines a degree of perceiving siblings as annoying, acting out of spite and ridiculing the other sibling, and Domination, which indicates which sibling plays a more important role, treats the other sibling with superiority and imposes their will on them (Wałęcka-Matyja, 2016). In the light of the theory of social bonds, attachment behaviours accompany a human being all their life, they are activated not only in intimate and love relationships, but also in stress or fear situations (Bowlby, 2007). Thus, it can be presumed that if the sibling relationship matrix translates into the functioning patterns in intimate relationships, it does not guarantee

satisfying social contacts. It rather leads to experiencing loneliness in both the romantic and family aspects.

The results presented in the last part of the study indicate that a conflictual relationship with siblings is a mediator in a positive correlation between romantic loneliness and the avoidance-oriented style of coping with stress (i.e. engaging in surrogate activities) in the group of people with siblings. The obtained correlation picture is consistent with the general assumptions of the researchers dealing more comprehensively with the problems of stress and loneliness (Adamczyk, DiTommaso, 2014; Heszen-Niejodek, 2005; Hobfoll, 2006; Lazarus, Folkman, 1987; Merz, De Jong Gierveld, 2016). People who experience a subjective feeling of dissatisfaction in an intimate relationship or are not in such a relationship are often characterized by decreased self-esteem and depressed mood, which can encourage avoidance behaviours in difficult situations. An emotion that usually accompanies loneliness is apprehension, which often facilitates conflictual relationships with close people (e.g. siblings), who may not provide support in stressful situations, thereby weakening the resources of a person when they try to make a decision to employ the task-oriented style to solve a problem.

Summing up, the picture of correlations between the position of a child in the family and the developing features of psychological functioning of an individual presented in the previous studies is of a relatively complex nature. Although the research results provide psychological knowledge from the subject area discussed in this study, they are still the issues that need further scientific exploration. Looking for the application aspects of the presented research, it is worth raising parents' awareness that it is through observation, imitation and identification that both only children and children with siblings learn proper behaviours that will help them cope with stress and overcome the feeling of loneliness. That makes children develop the feeling of agency, self-esteem as well as confidence that they are equipped with competencies and resources which they can use to build adequate interpersonal relationships. Also, the ability to cope with stress and loneliness can have a positive impact on the general psychological wellbeing of an individual.

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